

REMARKS/ARGUMENTS

Favorable reconsideration of the present application in light of the following discussion is respectfully requested.

Claims 1 and 3-37 are pending in this application. Claims 7-36 are withdrawn from consideration. Claims 1, 3 and 4 are amended, and Claim 37 is new. The amendment to Claims 1, 3 and 4 and new Claim 37 find support in the specification, at least at paragraphs [0108] and [0123], and in Figs. 6, 7, 9, 10A, 12 and 13. Therefore, it is respectfully submitted that no new matter has been added.

In the outstanding Office Action, Claims 1 and 4 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. 2002/000118 (Nakajima); Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nakajima in view of U.S. 6,148,168 (Hirai); Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nakajima in view of U.S. 6,342,963 (Yoshino); and Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Nakajima in view of Yoshino and further in view of U.S. 6,115,165 (Tada).

Claim 1, as clarified by this Amendment, recites:

A color shift correcting method for correcting a color shift due to misregistration of images in different colors, where a multi-color image is formed by developing latent one-color images written onto respective image carriers by an optical writing device, and directly or indirectly transferring developed one-color images onto a movable element, said method comprising:

adjusting a position at which one of said image carriers is irradiated with an optical beam of a laser light emitting element in a sub-scanning direction to correct said color shift while said optical beam is irradiated from said optical writing device onto said image carriers to develop the latent one-color images, said adjusting including,

writing and developing a one-color pattern on said image carriers;

transferring the one-color pattern developed on said image carriers onto the movable element to form a multi-color pattern on the movable element;

reading the multi-color pattern transferred onto the movable element and detecting the color shift among the developed one-color patterns from the read multi-color pattern with a color shift sensor;

rotating the laser light emitting element, which is rotatably held by a holding member, about a rotational central axis of the holding member to move a laser light emitting position of the laser light emitting element in a sub-scanning direction with an optical axis of the optical beam being inclined with respect to the rotational central axis of the holding member, ***based on the result of the detected color shift obtained from the color shift sensor***; and

substantially aligning the rotational central axis of the holding member with the optical axis of the optical beam at a point at which the optical beam is deflected off of a polygon mirror towards one of the image carriers. [emphasis added]

As presently clarified in the above-emphasized portions of amended Claim 1, a one-color pattern is written and developed on each of a plurality of image carriers. The patterns are then transferred onto a movable element to form a multi-color pattern on the movable element. The multi-color pattern is read from the movable element, and a color shift among the developed one-color patterns is detected from the read multi-color pattern with a color shift sensor. Support for the above-emphasized clarifications to Claim 1 is found in the original claims, and in the specification at least at paragraphs [0108] and [0123] with reference to Figs. 9 and 10a.

The Office Action relies on Nakajima for an asserted disclosure of detecting a color shift among developed one-color images, citing Fig. 3a. Fig. 3a of Nakajima shows a pair of beam spots 32 and a pair of beam spots 34 on a scanned surface. A deviation of emission direction of the laser beams 30 and 31, which respectively produce beam spots 32 and 34, causes a central position 33 (of beam spots 32) to deviate from a central position 35 (of beam spots 34).¹ Adjusting screws are provided in Nakajima for manually adjusting an angle adjustment of the light sources which produce laser beams 30 and 31 for aligning the central position 33 with the central position 35.² Nakajima relates to adjusting a beam pitch when forming a latent image on an image carrier using a plurality of beams.

¹ Nakajima, Fig. 3a and paragraph [0109].

² Nakajima, see Fig. 3b and paragraphs [0110] to [0115].

Thus, Nakajima measures the aforementioned beam deviation and manually adjusts the light sources to compensate. There is no disclosure in Nakajima of a color shift sensor and no disclosure of rotating a laser light emitting element based on a result of detected color shift obtained from a color shift sensor.

Nakajima fails to disclose or suggest writing and developing a one-color pattern on each of a plurality of image carriers, transferring the one-color pattern developed on each of the image carriers onto a movable element to form a multi-color pattern, and reading the multi-color pattern and detecting a color shift among the developed one-color patterns from the read multi-color pattern **with a color shift sensor**, as recited in clarified Claim 1.

Therefore, it is respectfully submitted that Nakajima fails to anticipate clarified Claim 1 and any claims depending therefrom.

Moreover, clarified Claim 4 recites:

The color shift correcting method according to claim 1, further comprising:

setting a write timing at which said multi-color pattern is formed based on a timing at which a reference point provided on the movable element is detected by the color shift sensor.

As noted above, Nakajima does not disclose a color shift sensor. Thus, Nakajima fails to describe setting a write timing for forming a multi-color pattern on a movable element based on a timing at which a reference point provided on the movable element is detected by a color shift sensor.

The Office Action relies on Fig. 5, element 48 to disclose setting a write timing. However, element 48 is a sensor board for outputting a scan-start timing signal.³ Since Nakajima fails to describe forming a multi-color pattern on a movable element, as defined in clarified Claim 1 and noted above, it is unclear as to how Nakajima discloses setting a write timing at which a multi-color pattern is formed based on a timing at which a reference point

³ Nakajima, paragraph [0120] to [0121].

provided on the movable element is detected by a color shift sensor. Accordingly, it is respectfully submitted that, in addition to the above, Nakajima further fails to anticipate clarified Claim 4 by virtue of this feature.

None of the other cited references overcome the aforementioned deficiencies of Nakajima. Moreover, new Claim 37, although directed at a different statutory class and varying in scope, recites features substantially similar to those noted above in clarified Claim 1.

Therefore, it is respectfully submitted that clarified Claim 1 and new Claim 37 (including any claims depending therefrom) both contain allowable subject matter and should be allowed.

Consequently, in light of the above discussion and in view of the present amendment, this application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

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